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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,037	09/12/2003	John D. Hyde	IMPJ-0003D1	6704
49684	7590	12/08/2005	EXAMINER	
THELEN REID & PRIEST LLP			SOWARD, IDA M	
IMPJ			ART UNIT	
P.O. BOX 640640			PAPER NUMBER	
SAN JOSE, CA 95164-0640			2822	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,037

Applicant(s)

HYDE ET AL.

Examiner

Ida M. Soward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-40 and 44-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-40 and 44-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicants' amendment filed October 3, 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36-37, 39-40, 44-49 and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergemont (US 6,563,731 B1) in view of Yamashita et al. (US 6,777,758 B2).

In regard to claims 36, 38, 44-48 and 50, Bergemont teaches a p-channel floating gate device, comprising: a p- doped substrate 202; a first n- well (to the left of well 205) and a second n- well 205 disposed in the substrate 202; a first p+ doped region disposed in the first n- well (to the left of well 205) forming a source and a second p+ doped region disposed in the first n- well (to the left of well 205) forming a drain; a channel disposed in the first n-well (to the left of well 205) between the source and the drain; a tunneling junction in the second n- well 205; a layer of gate oxide disposed above the channel, the first n- well (to the left of well 205) and the second n- well 205; a polysilicon (abstract) floating gate 204 disposed above the layer of gate oxide; a source

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contact terminal V_{pp} electrically coupled to the source 206; a drain contact terminal V_{pp} electrically coupled to the drain 207 (Figure 3, columns 4-5, lines 30-67 and 1-17, respectively).

In regard to claim 44 concerning the synapse transistor configured to operate as a current source without gate input using a single polysilicon gate layer, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function, *In re Danly*, 263, F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). Apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

In regard to the preamble of claims 45 and 47, the main body of the claims is taught by the applied reference above.

In regard to claims 39 and 51, Bergemont teaches the transistor formed with a single layer 204 of conductive polysilicon (abstract) (Figure 3, columns 4-5, lines 30-67 and 1-17, respectively).

In regard to the preamble, If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines

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a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation").⁷

However, Bergemont fails to teach a well contact terminal coupled to a second n-well.

In regard to claims 36, 38 and 50, Yamashita et al. teach a well contact terminal 32 coupled to a second n-well 12 (Figure 1, columns 7-8, lines 1-67 and 1-67, respectively).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transistor structure as taught by Bergemont with the transistor structure having a well contact terminal coupled to a second n-well as taught by Yamashita et al. to reduce the layout area of elements for fixing the potentials of wells in a semiconductor device (column 1, lines 6-10).

In regard to claims 37-38 and 49-50, Yamashita et al. teach the third p+ doped region and the fourth doped region disposed in a second well 12 p+ doped region shorted together with a conductive layer 40 which forms a bridge over a floating gate 62 (Figure 1, columns 7-8, lines 1-67 and 1-67, respectively).

In regard to claim 51, Yamashita et al. teach the well contact terminal 32 being strapped to a third and fourth doped region (Figure 1, columns 7-8, lines 1-67 and 1-67, respectively).

In regard to claims 40 and 52, note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re

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Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Fitzgerald, 205 USPQ 594, 596 (CCPA); In re Marosi et al., 218 USPQ 289 (CAFC); and most recently, In re Thorne et al., 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that Applicant has burden of proof in such cases as the above case law makes clear. As to the grounds of rejection under section 103, see MPEP § 2113.

Response to Arguments

Applicant's arguments with respect to claims 36-40 and 44-52 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Karasawa et al. (US 6,791,147 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M. Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday 6:30am to 5:00pm.

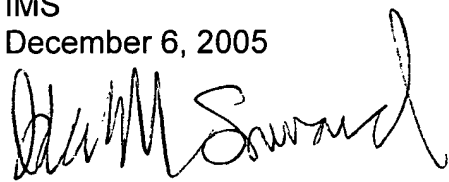
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMS

December 6, 2005


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